

Audit of Blood Glucose and Insulin Management of Diabetic Mothers during delivery

Rafique S, Castro E, Dashora U, Sathiskumar P.

Conquest Hospital, Hastings
East Sussex Healthcare NHS Trust

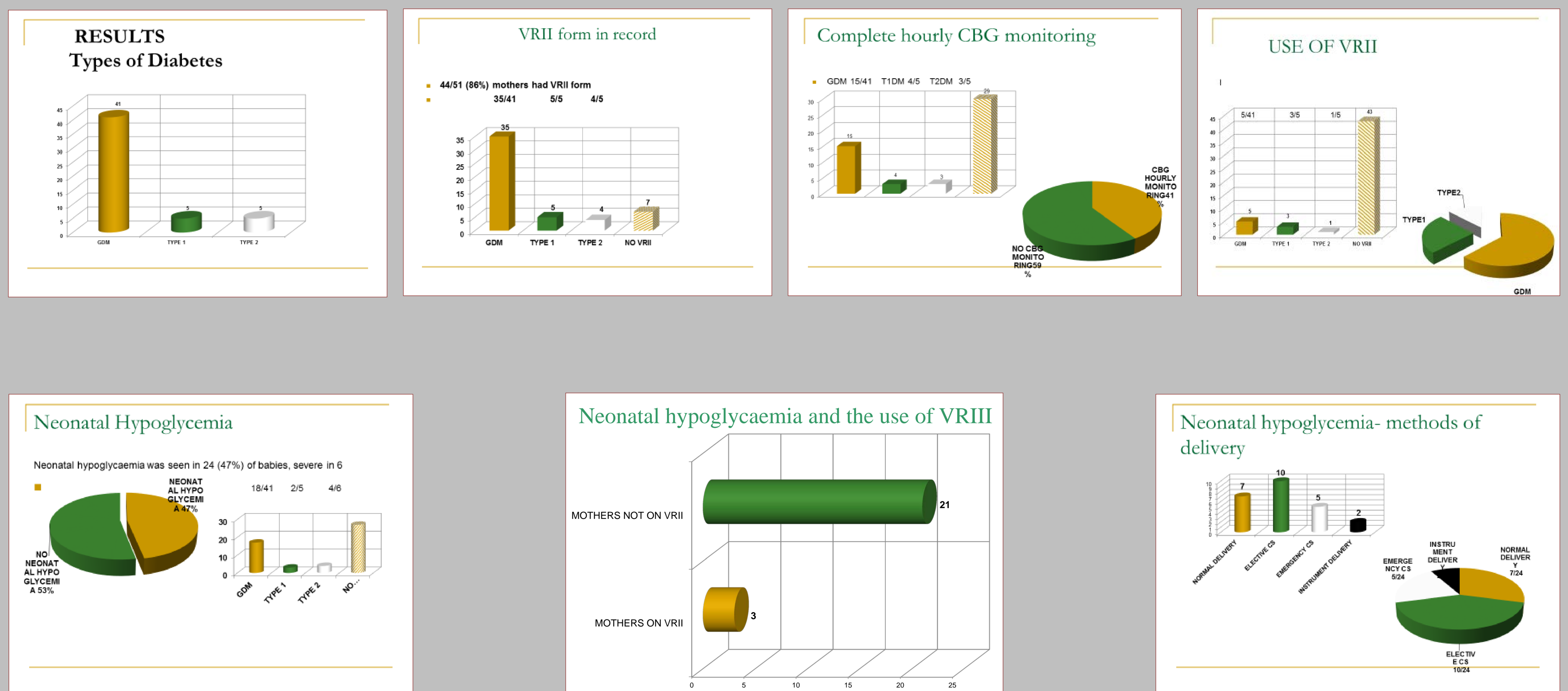
Introduction:

- Aim to keep the blood glucose of diabetic mothers in labour between 4-7mmols/L during delivery to reduce the risk of neonatal hypoglycaemia.
- Variable rate insulin infusion (VRII) should be started if the blood glucose levels are more than 7mmol/L in early labour.
- Aim of audit was to find the extent of use of insulin infusion in labour and its outcomes with regard to neonatal hypoglycaemia.
- We also audited our diabetes management of these patients in peripartum period.

Methods:

- 51 mothers (with pre-existing and gestational diabetes) delivered during one year (July 2014 to June 2015) selected.
- Collected data to see whether they all had appropriate delivery plan, blood glucose control, insulin management, method of delivery and also the incidence of neonatal hypoglycaemic episodes.

Results:



- 9 mothers started on VRII when blood glucose was between 7 - 13.8 mmol/L in early labour.
- 3 babies of mothers on VRII did develop hypoglycaemia.
- 5 mothers who had blood glucose levels of between 7 to 9.1mmols/L were not appropriately started on Insulin infusion

Conclusion:

- Insulin infusion was started in 17.6% of our mothers.
- Neonatal hypoglycaemia was found in 24 (47%) of babies, severe in 12%. More hypoglycaemia in non VRII group compared to those on VRII 21/24 vs 3/24
- High incidence (67%) of neonatal hypoglycaemia in babies of diabetic mothers born with caesarian section.
- Poor adherence to current guidelines in management of blood glucose levels during delivery.

References:

NICE guidance: *Diabetes in pregnancy*. Feb 2015
Caplan R. *Constant Intravenous Insulin Infusion During Labor and Delivery in Diabetes Mellitus*, *Diabetes Care* January 1982 vol. 5 no. 1, 6-10
The HAPO Study Cooperative Research, *Hyperglycemia and Adverse Pregnancy Outcomes Group*. *NEJM* 2002; 358:1991-2002